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IN THE CLAIMS

1. (Previously Presented) A method of detecting fluid movement, accumulation, or depletion determining the presence of fluid volume in mammalian tissue of a mammal having a body, comprising:

providing a first set of injection electrodes and a second set of measurement electrodes;

positioning members of the first set of electrodes on an external surface of the body to introduce electrical current flow through the mammalian tissue and thereby establish flow paths that define injection vectors along which electrical currents flow between two or more injection electrodes;

positioning members of the second set of electrodes on the body to define measurement vectors relating to electrical voltages produced in response to the electrical currents flowing between the injection electrodes, the injection and measurement vectors defining an anatomical space of the mammalian tissue;

deriving from each of different pairs of the injection and measurement vectors two or more electrical bio-impedance values that is characteristic of indicating the electrical bio-impedance of body tissues and fluids within a region of the anatomical space;

and analyzing the two or more electrical bio-impedance values to detect a presence of a volume of fluid or change in a volume of fluid for indications of fluid movement, accumulation, or depletion affecting the region in the anatomical space.

2. (Previously Presented) The method of claim 1, in which the electrical current flow is introduced at multiple signal frequencies and the analyzing of the electrical bio-impedance values includes Fourier analysis and data reduction.

3. (Previously Presented) The method of claim 1, in which the electrical current flow is introduced by a complex electrical current waveform and the analyzing of the electrical bio-impedance values includes chirp transform analysis or waveform analysis.

4. (Original) The method of claim 1, in which the analyzing of the electrical bio-impedance values entails determining differences in the electrical bio-impedance values derived from the injection and measurement vectors.

5. (Original) The method of claim 4, further comprising determining temporal changes in the electrical bio-impedance values derived from the injection and measurement vectors.

6. (Original) The method of claim 1, in which the analyzing of the electrical bio-impedance values entails determining temporal changes in the electrical bio- impedance values derived from the injection and measurement vectors.

7. (Original) The method of claim 1, in which each member of the first set includes a current source and a current sink, the current source and current sink being positioned at locations on the body such that electrical current flowing from a current source of one of the members flows into a current sink of another one of the members.

8. (Original) The method of claim 1, in which each member of the first set includes multiple current sources and multiple current sinks, the current sources and current sinks being positioned at locations on the body such that electrical current flowing from a current source of one or electrical currents flowing from current sources of more than one of the members flow into one or more current sinks of another one of the members.

9. (Original) The method of claim 1, in which the injection and measurement vectors define a nominal shape of the anatomical space in the presence of a nominal quantity of fluid, and in which the presence of other than the nominal quantity of fluid changes the anatomical space from its nominal shape.

10. (Original) The method of claim 1, further comprising analyzing the electrical bio-impedance values to determine the extent of fluid volume in the mammalian tissue.

11. (Original) The method of claim 1, in which the fluid includes blood, and further comprising analyzing the electrical bio-impedance values to determine whether the presence of a volume of blood indicates an accumulation or a loss of blood.

12 – 26. (Canceled)